

Remarks

Reconsideration and continued prosecution of the present application is respectfully requested in view of the amendments above and the remarks that follow.

Claims 1 to 18 are pending. Claim 1 is being amended.

Paragraph 2 of the Office Action indicated that the status of the parent case 09/229,724 should be updated. In response thereto, Applicants have amended the first paragraph on page 1 of the specification to indicate that case is now abandoned.

Paragraph 3 of the Office Action objected to the drawings as not showing every feature specified in the claims. In response thereto, Applicants have amended FIG. 3 to include schematic representations of heaters attached to external surfaces of housing 12, as described in the specification. A replacement sheet containing amended FIG. 3 is included herewith. It is respectfully submitted that no new matter has been added.

Paragraph 4 of the Office Action objected to claims 1-5 and 16-18 as informal in that "channel" should be changed to --channels-- in the third line of claim 1. In response thereto, claim 1 has been amended as suggested. The amendment merely corrects a linguistic error and does not narrow the scope of claim 1. Withdrawal of the rejection is requested.

Paragraph 7 of the Office Action Claims rejected claims 1-5 and 16-18 as obvious over U.S. Patent 3,557,265 (Chisholm et al.) in view of U.S. Patent Nos. 4,880,370 (Krumm) and 5,728,407 (Matsui). The Office Action posits that it would have been obvious to modify the feedblock of Chisholm et al. such that at least one flow channel has a cross-sectional area that changes from a first position to a second position to obtain uniform flow according to Krumm, and to further modify the Chisholm et al. feedblock with the axial rod heater of Matsui to enable temperature zones. Applicants respectfully traverse the rejection.

Setting aside for the time being the issue of the Chisholm et al./Krumm combination, it would not have been obvious to modify the feedblock of Chisholm et al. to include the heater of Matsui in a way that falls within the scope of claim 1. Matsui relates to a die (1) for a melt-blowing apparatus suitable for making melt-blown nonwoven fabric, where a plurality of thin nozzle orifices (23) is provided in a nozzle piece (3) disposed at the outlet of a die body (2). The die body includes a coat-hanger-style distributor (21) which distributes the resin flow in a direction crosswise to a spinning direction to nozzle orifices (23) disposed along a straight line (see e.g. col. 3 line 38 to col.

4 line 24 of Matsui). This straight line corresponds to the width dimension of the nonwoven fabric made by the die. Matsui discloses an embedding-type heater (14) to provide temperature-controlling zones along this line so that the nonwoven fabric can be made to have a uniform thickness. See, e.g., col. 2 lines 33-45, col. 4 lines 38-65, col. 6 lines 16-43, and the sectional view provided in FIG. 3. In Chisholm et al., first and second thermoplastic materials are extruded by first and second extruders (11,12), passed through a distribution manifold (13), and then passed through transition piece (17), also referred to as a “die”. (See e.g. col. 3 line 46 ff. and col. 6 line 23.) The laminated film issues from a discharge opening (19) of the die. As shown best in FIG. 4 of Chisholm et al., opening (19) is elongated to define the width dimension of the film or sheet made by the apparatus (10).

With this background, it would not have been obvious to combine Matsui with Chisholm et al. In the first place, there is no suggestion or motivation to combine the references. Although the Office Action implies that the necessary motivation might due to the fact that “such a rod heater would enable temperature zones”, there is no suggestion outside of hindsight that such temperature zones would be desirable in connection with the passageways (36,37) of Chisholm et al. However, even if one were somehow motivated to combine the two references, at most one would position the heater of Matsui proximate the outlet of the die of Chisholm et al. (e.g., outlet 19 of transition piece 17, or outlet 48 of transition piece 46), not proximate to conduits within a feeder tube plate as specified in pending claim 1, so as to control any thickness uniformity problems encountered, in keeping with the teachings of Matsui. One would not position the Matsui heater proximal to conduits within a feeder tube plate as specified in pending claim 1, since that would not be expected to have any effect on film thickness uniformity. Therefore, the combination of Matsui with Chisholm et al. and Krumm is improper. The rejection of claim 1, and its dependent claims 2-5 and 16-18, should be withdrawn.

In paragraph 8 of the Office Action, claims 11, 14, and 15 were rejected as obvious over Chisholm et al. in view of Krumm and U.S. Patent 4,426,344 (Dinter et al.). The Office Action states that it would have been obvious to modify the feedblock of Chisholm et al. according to Krumm, and “to further modify the feed block with a housing with heaters because such a housing would hold the feedblock and maintain extrusion temperatures therein as disclosed by Dinter et al. (-344)”. The Office Action also states that Dinter et al. “disclose a housing 29 for holding an extrusion apparatus, and heaters 43 attached to the housing 29.”

In response, Applicants respectfully traverse the rejection. The undersigned has reviewed the cited Dinter et al. reference, and although it does refer to a housing at col. 5 line 41, no disclosure of any "heaters 43" or any other heaters can be found. Since claim 11 requires "heaters attached to said external surface of said housing", the combination of Dinter et al. with Chisholm et al. and Krumm fails to suggest the claimed combination. Withdrawal of the rejection of claim 11, and its dependent claims 14 and 15, is requested.

In paragraph 9, the Office Action rejected claims 12 and 13 as obvious over the combination of Chisholm et al, Krumm, Dinter et al., and Matsui. Applicants respond that these claims depend from claim 11, which is submitted to be allowable for the reasons given above, and therefore the rejection should be withdrawn.

In paragraph 11, the Office Action provisionally rejected claim 1 for double patenting in view of copending application 09/810,916. In response, Applicants note that claim 1 of the '916 application (3M Docket No. 51932US015) was canceled in a Preliminary Amendment dated March 16, 2001. The double patenting rejection should therefore be withdrawn.

Conclusion

The pending claims are believed to be allowable in view of the comments above. Beyond the fees authorized above, it is believed that no further fee is due; however, in the event any additional fee is required, please charge such fee to Deposit Account No. 13-3723.

Respectfully submitted,

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Date

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